

JT Detectors for Missile Seekers

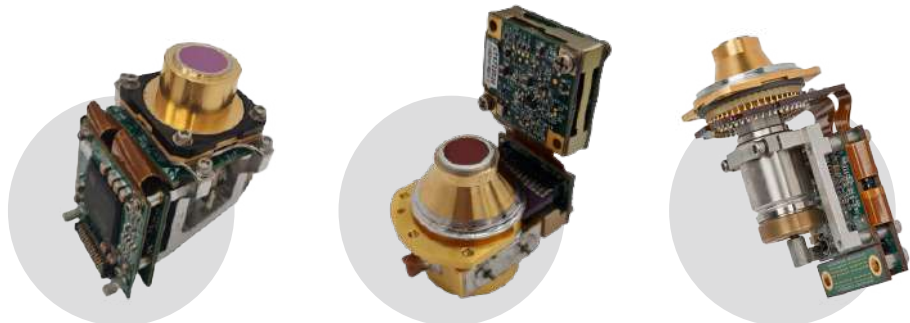
JT detectors are custom-designed specifically for missile-related applications. Their focal plane arrays (FPAs) feature a digital Readout Integrated Circuit (ROIC) with a resolution of 640 x 512. These detectors boast a unique Dewar configuration that enables rapid cooling, which ensures swift mission readiness by utilizing the Joule-Thomson (JT) cooling technique. Due to the minimal heat generation at the focal plane, these detectors are capable of supporting extended mission durations. Additionally, they can be outfitted with a proximity board that provides a user-friendly Camera Link interface, facilitating seamless integration of the detectors into customer systems.

Main Features

- Camera Link interface (optional for enhanced connectivity)
- High stability in Non-Uniformity Correction after cool-down
- Compatibility with different types of cooling gases
- Compact structural design

Applications

- Long range missiles
- Ground missile systems
- Missile defense systems
- Air missile seekers



DDC	Pelican D		Blackbird 640	Pelican-D LW
Technology	InSb	InSb	XBn	T2SL
Detector format	640x512, 15μm	640x512, 10μm		640x512, 15μm
Cooler options	Joule-Thomson (JT)			
Spectral band	3.6 -5 μm	3.6-5 μm 3.6-4.2 μm		LWIR cut off 9.3μm
Operating temperature	77K	77K	150K	77K
Cool-down time @23°C	<14sec (N2 cooling gas)	<20 sec (cooling gas depended)		<20 sec (N2 cooling gas)
Mission profile	MWIR	MWIR		LWIR
Length (optical axis)	84mm (with cooler & proxy)	49mm with proxy and without cooler		80mm with proxy and without cooler
Weight (with cooler and proxy)	250g	120g		280g
Maximum frame rate	350Hz	350Hz		350Hz
NETD at 70% well fill	20mK	30mK		32mK

